HEALTH AFFAIRS

TRICARE Management Activity

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WELCOME

IM/IT SPEAKER TRACK

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The Personal Information Carrier (PIC)

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http://www.cba.ha.osd.mil/projects/fhp/pic/pic

Overview

- Description of Device
- Concept of Operations
- Overview of Evaluation
  - Goals
  - Description
  - Preliminary Findings
  - Next Steps

Description of PIC Device

- PIC based on SanDisk multimedia card
  - Uses flash memory technology
  - 8 megabyte capacity
  - Data storage only; no processor
  - Compatible with all commercial operating systems
  - As transparent to the user as a floppy disk
  - extremely rugged

PIC
ITI
INFORMATECH, INC.

Description of Device

- Water resistant
- Temperature resistant (-40 to 140 degF)
- Pressure resistant (-1300 to 15,000 ft relative to mean sea level)
- Electromagnetic interference resistant
- Dust resistant
- Shock/vibration resistant

Description of Device

- PCMCIA adapter used to interface with laptop computer
- Adapter requires *Card Wizard*® PC card driver software when using *Windows NT*
- Application Processing Interface (API) being developed to regulate read/write process

Concept of Operations

- Store pre-deployment readiness indicator data
- Support of TMIP “communications out” contingency
  - Store and transfer clinical data between echelons 1-3 when network connectivity absent
- Secondary data source for computerized patient record (CPR) and Interim Theater Data Base (ITDB)

Concept of Operations

- PIC initially will only carry information from 119 essential data elements
- Digital imaging and dictation could be added as technology permits
- If PIC becomes full, second one would be issued (“Vol. 2” of medical record)
- New PIC would be issued if original lost

Evaluation Goals

- Validate the PIC Concept of Operations
- Obtain performance measurements on both the PIC & Smart Card
- Evaluate impact of an electronic device on the health business process
- Evaluate reliability/durability of PIC & Smart Card in a realistic field environment

Evaluation Concept

- Two phases
  - Controlled laboratory testing (Phase I)
  - Military field exercise (Phase II)
- Side-by-side comparison of PIC and Smart Card
  - Using commercial software product (*MedDoc* ®)
  - Medical scenarios include both sick call and trauma
- Equal playing field (same data elements)
- AMEDD Board independent evaluator for Phase II

Evaluation Preliminary Findings

- Phase 1
  - Software/hardware functioned well
  - Risk reduction - identified minor bugs to correct for Phase II
- Phase II
  - Software/hardware functioned well
  - Excellent feedback on business process impact from participants

Evaluation Preliminary Findings

- Phase II Business Process Feedback
  - Concept of an electronic storage device sound
  - Use of laptops hindered/delayed patient care
    - Preferred smaller PC platform (handheld, pen-based)
    - Needed more than one or two PCs at each echelon
  - Data choices for EMTs excessive at echelons I and II
  - Desired simplistic, customized software for each echelon

Next Steps

- Review evaluation final report
- Pursue integration activities with CHCS II and TMIP
- Refine how PIC fits into business process of health care

PIC Summary

- Based on flash memory technology
  - 8Mb capacity, no active processor
  - extremely rugged, near size of metal dog tags
- Stores pre-deployment data as well as clinical encounters in theater
  - surrogate for CPR, ITDB
- Two phase evaluation showed idea sound, needs to fit business process better

Questions

Comments

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